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Navigating a river of knowledge
Utah teams up with federal, state and water agencies to assess the state of the Colorado River

SALT LAKE CITY – As one of the seven states that make up the Colorado River Basin, Utah takes an active interest in this critically important river that provides water to 40 million people and 5 million acres of farmland. For the past three years, the Utah Division of Water Resources has partnered with the other basin states to form a workgroup to support climate and hydrology studies and centralize them to help guide management and planning efforts for the Colorado River.

In recent decades, increasing water demand, dry conditions and warming temperatures have impacted the Colorado River. With support and guidance from more than a dozen federal, state and local water agencies, researchers from the University of Colorado Boulder's Western Water Assessment teamed up with leading experts to integrate nearly 800 peer-reviewed studies, agency reports and other sources to assess the state of the science and the technical methods relevant to water resources in the Colorado River Basin.

"This is a significant collaborative effort that brought together stakeholders within the Colorado River Basin," said Utah Division of Water Resources Deputy Director Candice Hasenyager. "The result is a comprehensive scientific report unlike any that has ever been produced about the Colorado River. Scientists present the latest research, data and tools available to help our understanding of past, current and future hydrologic conditions, which will guide planning and projections for the river."

Colorado River Basin Climate and Hydrology: State of the Science aims to create a shared understanding of the physical setting and the latest data, tools and research underpinning the management of Colorado River water resources. In identifying both challenges and opportunities, the report will guide water resource managers and researchers in efforts to improve the short-term and mid-term forecasts and long-term projections for the basin's water system. By serving as a common knowledge base, the report will help readers navigate the future of the Colorado River Basin, which supports the seven basin states (Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming), 29 tribes and Mexico.

A high-level overview is included in the Executive Summary, which features key points, challenges and opportunities from each of the 11 chapters – or readers can dive into the full report for comprehensive supporting content.

The report sets the stage by focusing on the current understanding of climate and hydrology in the Colorado River Basin and provides an overview of the primary modeling tools used for basin planning. A thorough discussion follows of the latest available knowledge regarding weather,

climate and hydrology observations, and the tools used to interpret these data. Forecasts, projections and the various methods used for producing them are also covered, including those relative to climate change and paleo-records.

Jeff Lukas and Elizabeth Payton from the University of Colorado Boulder served as lead authors and editors. Both are researchers from CIRES and CU Boulder's Western Water Assessment program, a university-based applied research program that addresses societal vulnerabilities to climate variability and climate change, particularly those related to water resources.

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Utah Division of Water Resources
Wyoming State Engineer's Office
New Mexico Interstate Stream Commission

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